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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,854	04/02/2002	Kunitoshi Hayashi	I-183	8323

802 7590 05/01/2003  
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EXAMINER

LIANG, LEONARD S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/018,854

Applicant(s)

HAYASHI ET AL.

Examiner

Leonard S Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 15-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 states "An ink-jet imaging apparatus...including a contact base having a single protrusion extending from a first surface and a opposite second surface, the tip of the single protrusion contacting the carriage and defining a touching point the contact base being pivotable about the touching point on two different axes, said second circuit face positioned on the contact base second surface and being continuously contactable with the first circuit face." Based on the language of the claim, it is not clear what is meant by "including a contact base having a single protrusion extending from a first surface and a opposite second surface." Is the applicant claiming 1) a contact base with two surfaces where each surface has a single protrusion, or 2) a single protrusion connecting the first and second surfaces, or 3) a first surface with a single protrusion, and a second surface by itself without a protrusion? All three interpretations could be made based on the claim language. Furthermore, it is not clear what is meant by an "opposite second surface". Is this meant to imply that the first contact base surface directly faces the second contact base surface? Such an interpretation does not seem to be suggested by the applicant's figures and it is not clear how in this scenario, the second circuit face could be positioned on the contact base second surface and contact the first circuit face at the same time. Finally, it is not clear what is meant by "defining a touching point the contact base being pivotable about the touching point on two different axes." This is not proper grammar. Is the claim supposed to state "defining a touching point **with** the contact base being pivotable about the touching point on two different axes?"

Claims 16-20 depend from rejected claim 15. Furthermore, in claim 16, there is a lack of antecedent basis for "the carrier."

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

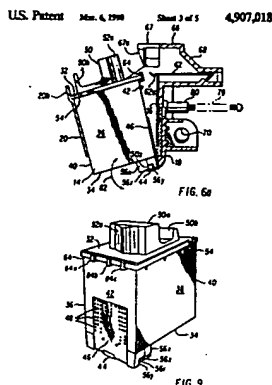
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

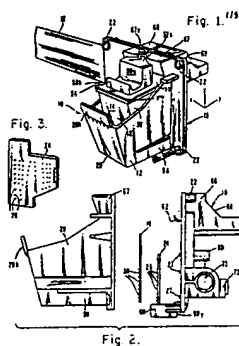
2. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Pinkerpell et al (US Pat 4907018).

Pinkerpell et al discloses:

- {claim 1} An ink-jet imaging apparatus (column 1, lines 7-10) which is provided with a printing head (figure 9, reference 44) having a first circuit face (figure 9, reference 46) having plural first electric connection points (figure 9, reference 48), and a carriage (figure 2) having a second circuit face (figure 2, reference 16) having plural second electric connection points to be connected respectively to the first electric connection points (figure 2, reference 30), and which forms an image by ejecting an ink from the printing head with reciprocating movement of the carriage in a main scanning direction in accordance with image signals transmitted through the first electric connection points and the second electric connection points, wherein one of the first circuit face and the second circuit face moves to follow the other circuit face (column 1; column 2, lines 1-6); each of the first circuit and the second circuit face being pivotable about 2 mutually perpendicular axes (column 3, lines 59-62; column 4, lines 41-44; the second circuit face 16 can pivot about the spring pad 24 during installment)



- {claim 2} the first circuit face follows the second circuit face by movement in a direction crossing the second circuit face (figure 1; column 1; column 2, lines 1-6)



- {claim 3} the second circuit face follows the first circuit face by movement in a direction crossing the first circuit face (figure 1; column 1; column 2, lines 1-6)
- {claim 4} the first circuit face follows the second circuit face by movement in a direction nearly parallel to the second circuit face (figure 1; column 1; column 2, lines 1-6)
- {claim 5} the second circuit face follows the first circuit face by movement in a direction nearly parallel to the first circuit face (figure 1; column 1; column 2, lines 1-6)
- {claims 6} the apparatus comprises a contact base which has the second circuit face fixed thereon and follows the first circuit face by movement in the crossing direction, and a pushing member which is held at least between the second circuit

face and the contact base and/or between the first circuit face and the printing head (figure 2, reference 24, 26)

- {claim 7} the contact base follows the first circuit face by movement in a direction nearly parallel to the first circuit face (figure 1; column 1; column 2, lines 1-6)
- {claim 8} the contact base is replaced by another contact base which has the first circuit face fixed thereon and follows the second circuit face by movement in the crossing direction (figure 9, reference 42; column 1; column 2, lines 1-6)
- {claim 9} the contact base follows the second circuit face by movement in a direction nearly parallel to the second circuit face (figure 1; column 1; column 2, lines 1-6)
- {claim 10} the contact base has a protrusion formed near the gravity center of the contact base and touching the carriage (figure 2, reference 27)
- {claim 11} the contact base follows the first circuit face or the second circuit face by swing movement around the touching point of the protrusion touching the carriage at the center (figure 6a, reference 56r)
- {claim 12} the carriage has a protrusion to touch the contact base at or near the gravity center of the contact base (figure 2, reference 27)
- {claim 13} the contact base follows the first circuit face or the second circuit face by swing movement around the touching point of the protrusion touching the contact base at the center (figure 6a, reference 56r)
- {claim 14} the first circuit face or the second circuit face confronting the pushing member is flexible (column 2, lines 60-68)

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reed et al (US Pat 5189787) discloses an attachment of a flexible circuit to an ink-jet pen.

Buican (US Pat 5629725) discloses a carriage mount for an ink jet cartridge.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703) 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

lsl *LSL*  
April 22, 2003

*Judy Nguyen*  
JUDY NGUYEN  
PRIMARY EXAMINER